## SAMPLE SURFACE OBSERVATION DEVICE

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## **Abstract**

PURPOSE:To make it possible to control the beam intensity always constant while continuing the optical observation, and to improve the accuracy and the efficiency of measurement, by controlling the emitting beams with a focus lens and an object lens depending on the absorption current of a thin film transparent

CONSTITUTION: As the intensity of electron beams emitted from an electron gun is weakened, the absorption current detected by a thin film transparent filter 9 is decreased, and the focusing force of a focus lens 4 is reduced by reducing the coil current of the focus lens 4 depending on the decrease of the absorption current. As the focusing force of the focus lens 4 is decreased, the beam amount passing through an object diaphragm is increased, the beam amount to irradiate the thin film transparent filter 9 is increased subsequently, and the absorption current detected by the thin film transparent filter 9 is also increased. When the absorption current reaches to a specific value, the rise of the coil voltage of the object lens 5 is controlled to make the focus of the beams on the surface of a sample S. when the electron beam intensity is made stronger, the operation is carried out oppositely.

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